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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/768,880

01/29/2004

Bernhard Schmitt

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7590

10/10/2006

THE MAXHAM FIRM  
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SAN DIEGO, CA 92121

EXAMINER

VERDIER, CHRISTOPHER M

ART UNIT

PAPER NUMBER

3745

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/768,880

Applicant(s)

SCHMITT, BERNHARD

Examiner

Christopher Verdier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 1-29-04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

Applicant's Amendment dated June 30, 2006 has been carefully considered but is non-persuasive. Claims 1-32 are pending. The specification has been amended to overcome most of the objections thereto as failing to provide antecedent basis for the claimed subject matter. Applicant's comment (see page 11, second paragraph of the Remarks dated June 30, 2006) that antecedent basis for claims 7 and 9 is found in the specification has been carefully considered and is persuasive; therefore the objection to the specification as failing to provide antecedent basis for the subject matter of claims 7 and 9 is withdrawn. The claims have been amended to overcome the informalities and rejections under 35 USC 112, second paragraph set forth in the first Office action. Correction of these matters is noted with appreciation.

The Power of Attorney filed June 30, 2006 is defective, because no certificate under 37 CFR 3.73(b) has been enclosed. With regard to Applicant's argument that the subject matter of claim 11 is supported by the specification referring to paragraphs 10, 16, and 31, this argument is not persuasive. The specification does not state that the axial length of the turbine blades is at most 80% of the radial extent of the blades. Applicant should consider amending the specification to state this feature.

Applicant has argued that amended claim 1, which now recites that the front face is convex and the back face is concave, defines over Bevens 289,958, because Applicant's turbine wheel rotates counterclockwise in the direction R, so that the smaller radii of curvature face is the front face and the larger radii of curvature face is the back face, while the wheel of Bevens rotates clockwise so that it does not throw a fluid, but is driven by means of a fluid jet k.

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Applicant has further argued that in addition to functioning in an opposite manner and for a different purpose, the blades of Bevans have exactly parallel radii of curvature of both the front face and the back face, while Applicant's turbine has blades which have different radii of curvature on the front face than on the back face. Applicant has further argued that in Bevans, the fluid engages the concave side of the blades, while in the instant application, the fluid is driven by the convex side of the blades. These arguments are not persuasive, because Bevans clearly discloses a turbine wheel having turbine blades disposed on the carrier plate in circular formation and curved in a direction perpendicular to the axis, the turbine blades comprising an unnumbered convex front face, and an unnumbered concave back face. The designation of a face of the blade being a front face or a back face is an arbitrary convention. A face may be either called the front face or the back face. The claims do not recite any structural relationship between the direction of rotation and the faces of the blade, nor do they exclude the wheel being driven by a fluid jet. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). With regard to Applicant's argument that the blades of Bevans have exactly parallel radii of curvature of both the front face and the back face, while Applicant's turbine has blades which have different radii of curvature on the front face than on the back face, this argument is not persuasive. The blades of Bevans are formed such that each of the faces have radially outer portions and radially inward portions with radii of curvature, such that at least portions of the front face have a lesser radius of curvature than the back face, and the radially outer portions of the front face and of the back face have a lesser radius of curvature than the radially more inward portions of the front face and of the back face.

Applicant has argued that amended claim 1, which now recites that the front face is convex and the back face is concave, defines over Fujii 3,140,042, because the blade gains thickness by degrees from the outer edge inwards, and that this is just the opposite of Applicant's invention. Applicant has further argued that the structure defined as, "at least portions of the front face have a lesser radius of curvature than the back face, and the radially outer portions of the front face and of the back face have a lesser radius of curvature than the radially more inward portions" differs markedly from Fujii, and that claim 1 as revised states that the front face is convex and the back face is concave, while Fujii defines the front face 14 as concave and the back face 17 as convex. These arguments are not persuasive, because the designation of a face of the blade being a front face or a back face is an arbitrary convention. A face may be either called the front face or the back face. The claims do not recite any structural relationship between the direction of rotation and the faces of the blade. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. Fujii discloses convex front face 17 and concave back face 14. In Fujii, at least portions of the front face have a lesser radius of curvature R3 than the back face at R2, and the radially outer portions of the front face at R3 and of the back face at R1 have a lesser radius of curvature than the radially more inward portions of the front face at R2 and of the back face at R4.

With regard to Saeki 6,007,300 (figure 8), Applicant has argued that amended claim 1, which now recites that the front face is convex and the back face is concave, defines over Saeki. This argument is not persuasive for the reasons set forth above with regard to Bevans and Fujii,

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namely that the designation of a face of the blade being a front face or a back face is an arbitrary convention. A face may be either called the front face or the back face. The claims do not recite any structural relationship between the direction of rotation and the faces of the blade. Applicant has further argued that Saeki does not disclose that “at least portions of the front face have a lesser radius of curvature than the back face, and the radially outer portions of the front face and of the back face have a lesser radius of curvature than the radially more inward portions.” This argument is not persuasive, because Saeki discloses that at least portions of the front face have a lesser radius of curvature near R6.7 than the back face near R18.2, and the radially outer portions of the front face near R6.7 and of the back face near R6.7 have a lesser radius of curvature than the radially more inward portions of the front face near R18.2 and of the back face near R18.2. Applicant’s argument that rotation of the wheel in an opposite direction of rotation would be structurally and technically wrong, illogical, and unsupportable, is not persuasive. The rejection does not make this statement. Additionally, the claims do not recite any structural relationship between the direction of rotation and the faces of the blade.

Applicant has argued concerning the rejection of claim 14 under 35 U.S.C. 103(a) as being unpatentable over Fujii 3,140,042 that the recitation of the specific blade inclination relative to the radius vector directed toward the inner edge of the turbine blade is not a matter of choice in design, because this statement is without foundation, technically wrong, and completely supportable. Applicant has further argued that turbine blades are like optical elements and are very carefully designed to achieve very specific results, and that their shapes, curvatures, thicknesses, angles, and lengths, all in relation to the direction of rotation, are never a

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matter of choice in design. Applicant also lists features of the blades of the instant application. These arguments are not persuasive. As set forth in the first Office action, the specific blade inclination relative to the radius vector directed toward the inner edge of the turbine blade is known to be a result-effective variable which influences the efficiency, noise, and pressure output, for example. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to select the blade inclination relative to the radius vector directed toward the inner edge of the turbine blade to be a specific value, such as from 2 to 15 degrees, for the purpose of optimizing the efficiency, noise, and pressure output, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. Additionally, turbine blades and optical elements are not analogous.

### ***Power of Attorney***

The Power of Attorney filed June 30, 2006 is defective, because no certificate under 37 CFR 3.73(b) has been enclosed.

### ***Specification***

The amendment filed June 30, 2006 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

Paragraph 22, line 7, amended to state that the diameter D is 27.5 mm, is new matter. The diameter D is 55 mm, but not 27.5 mm.

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Paragraph 29, lines 6-8, which are amended to state that the radii of curvature are about 100% greater than the radii of curvature of the radially outer portions of the front faces and back faces, respectively, adds new matter by using the term “about”. This would include values not originally disclosed as 100 percent. The term “about” should be deleted.

Paragraph 31, line 5, which recites a value of approximately 100%, adds new matter, because this would include values not originally disclosed as 100 percent. The term “approximately” should be deleted.

Applicant is required to cancel the new matter in the reply to this Office Action.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

Claim 11, which recites that the axial length of the turbine blades is at most 80% of the radial extent of the blades, has no antecedent basis in the specification.

Claim 30, which recites that the blade ring further comprises an external radius between of approximately 27.5 mm, has no antecedent basis in the specification.

### ***Claim Objections***

Applicant is advised that should claim 9 be found allowable, claim 24 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight



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difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1, line 9 has been amended to recite that the front and back faces are generally parallel. The original specification is limited to the front and back faces being parallel, but not generally parallel, which would include some deviation of the front and back faces variations not being parallel, which is new matter. Claim 6, line 3 has been amended to recite the range of “about” –5% to 15%. The term “about” adds new matter, because it would include values outside this range, which are not disclosed. Claim 14, line 9 has been amended to recite that the front and back faces are generally parallel. The original specification is limited to the front and back faces being parallel, but not generally parallel, which would include some deviation of the front and back faces variations not being parallel, which is new matter. The following instances of the term “about” in the amended claims add new matter to the values or ranges for the same reason set forth above: claim 14, line 18; claim 15, lines 3, 4, 5, and 6; claim 16, line 2; claim

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17, line 2; claim 18, line 2; claim 19, lines 3 and 5; claim 20, lines 3 and 5; claim 23, line 3; claim 25, line 2; claim 28, line 2, claim 31, lines 3 and 4; claim 32, lines 2 and 4. Claim 22, line 2, which recites that the radii of curvature of the radially inward portions are “at least 100%” greater than the radii of curvature of the corresponding radially outer portions of the front faces and back faces, respectively, adds new matter. The original specification is limited to the radii of curvature of the radially inward portions being 100% greater than the radii of curvature of the corresponding radially outer portions of the front faces and back faces, respectively.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 21-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Bevans 289,958. Note the turbine wheel comprising a carrier plate b, c formed as a circular disk or ring, the plate having a central axis l and configured for mounting so as to be rotatable about the axis, turbine blades a disposed on the carrier plate in circular formation and curved in a direction perpendicular to the axis, the turbine blades comprising an unnumbered convex front face, and an unnumbered concave back face, mounted so that the front and back faces are axially parallel, with each of the faces having radially outer portions and radially inward portions with radii of curvature, such that at least portions of the front face have a lesser radius of curvature than the

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back face, and the radially outer portions of the front face and of the back face have a lesser radius of curvature than the radially more inward portions of the front face and of the back face. The radially inward portions of the front faces and of the back faces, respectively comprise at least 30% of the radial extent of a turbine blade, while the radially outer portions of the front faces and back faces, respectively comprise at least 30% of the radial extent of the turbine blades. The radii of curvature of the radially inward portions are at least 50% greater than the radii of curvature of the corresponding radially outer portions of the front faces and back faces, respectively. The transition of the radii of curvature from the radially inward to the radially outer portion is in each case inherently located on a line connecting the centers of curvature of the respective radially inward and radially outer portion. The radii of curvature of the radially inward portions are at least 100% greater than the radii of curvature of the corresponding radially outer portions of the front faces and back faces, respectively. The recitation in claim 1, lines 1-2 of “for rotating disks and/or domes of paint-spraying apparatus” is a recitation of intended use. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Additionally, these limitations have not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*,

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535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Claims 1-2, 8-10, 21, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujii 3,140,042. Note the turbine wheel comprising a carrier plate 20, 21 formed as a circular disk or ring, the plate having a central axis near 22 and configured for mounting so as to be rotatable about the axis, turbine blades 11 disposed on the carrier plate in circular formation and curved in a direction perpendicular to the axis, the turbine blades comprising a convex front face 17, and a concave back face 14, mounted so that the front and back faces are axially parallel, with each of the faces having radially outer portions 18, 15 and radially inward portions 19, 16 with radii of curvature, such that at least portions of the front face have a lesser radius of curvature R3 than the back face at R2, and the radially outer portions of the front face at R3 and of the back face at R1 have a lesser radius of curvature than the radially more inward portions of the front face at R2 and of the back face at R4. The radially inward portions of the front faces and of the back faces, respectively comprise at least 30% of the radial extent of a turbine blade, while the radially outer portions of the front faces and back faces, respectively comprise at least 30% of the radial extent of the turbine blades, as indicated by distances 11, 12, and 13. The length to radius ratio of the turbine blades is 75mm/80 mm, which is 93.75%, and therefore the axial length of the turbine blades is at least 60 %, at least 65%, and at most 100% of the radial extent of the turbine blades. The transition of the radii of curvature from the radially inward to the radially outer portion is in each case located on a line connecting the centers of curvature of the respective radially inward and radially outer portion. The recitation in claim 1, lines 1-2 of “for

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rotating disks and/or domes of paint-spraying apparatus” is a recitation of intended use as set forth above. Additionally, these limitations have not been given patentable weight because the recitation occurs in the preamble, as set forth above. Note that although Fujii is directed towards centrifugal fan blades, these blades are structurally and functionally equivalent to the claimed turbine blades and will function as turbine blades when driven by working fluid. Note also that the designation of the blade radially outer portion and the blade radially inward portion depends on the viewing perspective in the drawing figures. Looking from the periphery of the carrier plate 21 in figure 5 towards the central axis 22, the portion adjacent 13 (see figure 1) is considered to be the blade radially inward portion while the portion adjacent 12 (see figure 1) is considered to be the blade radially outward portion.

Claims 1-4 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Saeki 6,007,300 (figure 8). Note the turbine wheel comprising a carrier plate 11 (see figure 12) formed as a circular disk or ring, the plate having an unnumbered central axis and configured for mounting so as to be rotatable about the axis, turbine blades 4/5 disposed on the carrier plate in circular formation and curved in a direction perpendicular to the axis, the turbine blades comprising a convex front face 5, and a concave back face 4 mounted so that the front and back faces are axially parallel, with each of the faces having radially outer portions near R61 and radially inward portions near R79 with radii of curvature, such that at least portions of the front face have a lesser radius of curvature near R6.7 than the back face near R18.2, and the radially outer portions of the front face near R6.7 and of the back face near R6.7 have a lesser radius of curvature than the radially more inward portions of the front face near R18.2 and of the back face

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near R18.2. The radially inward portions of the front faces and of the back faces, respectively comprise at least 30% of the radial extent of a turbine blade, while the radially outer portions of the front faces and back faces, respectively comprise at least 30% of the radial extent of the turbine blades. The radii of curvature of the radially inward portions are at least 50% greater than the radii of curvature of the corresponding radially outer portions of the front faces and back faces, respectively. The radius of curvature near R18.2 of the radially inward portion is no more than about four times the radius of curvature near R6.7 of the corresponding radially outer portion. The transition of the radii of curvature from the radially inward to the radially outer portion is in each case inherently located on a line connecting the centers of curvature of the respective radially inward and radially outer portion. The recitation in claim 1, lines 1-2 of “for rotating disks and/or domes of paint-spraying apparatus” is a recitation of intended use as set forth above. Additionally, these limitations have not been given patentable weight because the recitation occurs in the preamble, as set forth above. Note that although Saeki is directed towards centrifugal fan blades, these blades are structurally and functionally equivalent to the claimed turbine blades and will function as turbine blades when driven by working fluid. Note also that the designation of the blade radially outer portion and the blade radially inward portion depends on the viewing perspective in the drawing figures. Looking from the periphery in figure 5 towards the central axis 22, the portion near R79 is considered to be the blade radially inward portion while the portion near R61 is considered to be the blade radially outward portion.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujii 3,140,042. Fujii discloses a turbine wheel substantially as claimed as set forth above, with the length to radius ratio of the turbine blades being 75mm/80 mm, which is 93.75%.

However, Fujii does not disclose that the axial length of the turbine blades is at most 80% of the radial extent of the turbine blades (claim 11), and does not disclose that the axial length of the turbine blades is approximately 70% +/- 5% of the radial extent of the turbine blades (claims 12 and 13).

The recitation of the specific ratio of the axial length of the turbine blades to the radial extent of the turbine blades is a matter of choice in design. The ratio of the axial length of turbine blades to the radial extent of the turbine blades is known to be a result-effective variable which influences the efficiency, noise, and pressure output, for example. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to select the ratio of the axial length of the turbine blades to the radial extent of the turbine blades to be a specific value, such as at most 80% of the radial extent of the turbine blades, and/or as

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approximately 70% +/- 5% of the radial extent of the turbine blades, for the purpose of optimizing the efficiency, noise, and pressure output, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claims 14 and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujii 3,140,042. Fujii discloses a turbine wheel substantially as claimed as set forth above, including the feature that in a section perpendicular to the axis, the connecting line of the radially inward edge and of the radially outer edge of a turbine blade is inclined relative to a radius vector to the inner edge of the turbine blade, this being such that the outer edge of the turbine blade is ahead of the inner edge in the direction of rotation, with the connecting line being inclined by about 30 degrees relative to the radius vector directed toward the inner edge of the turbine blade.

However, Fujii does not disclose that the connecting line is inclined by 2 to 15 degrees relative to the radius vector directed toward the inner edge of the turbine blade (claim 14), does not disclose that the connecting line is inclined by about 5 to 12 degrees relative to the radius vector directed toward the inner edge of the turbine blade (claim 25), and does not disclose that the connecting line is inclined by about 8 degrees +/- 1 degree relative to the radius vector directed toward the inner edge of the turbine blade (claim 26).

The recitation of the specific blade inclination relative to the radius vector directed toward the inner edge of the turbine blade is a matter of choice in design. The specific blade



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inclination relative to the radius vector directed toward the inner edge of the turbine blade is known to be a result-effective variable which influences the efficiency, noise, and pressure output, for example. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to select the blade inclination relative to the radius vector directed toward the inner edge of the turbine blade to be a specific value, such as from 2 to 15 degrees, about 5 to 12 degrees, or about 8 degrees +/- 1 degree, for the purpose of optimizing the efficiency, noise, and pressure output, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

***Allowable Subject Matter***

Claims 5-7, 15-20, 23, and 27-32 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, first and second paragraphs, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

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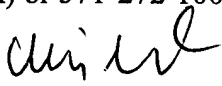
the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Verdier whose telephone number is (571) 272-4824. The examiner can normally be reached on Monday-Friday from 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward K. Look can be reached on (571) 272-4820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

C.V.  
September 29, 2006

  
Christopher Verdier  
Primary Examiner  
Art Unit 3745